

Bellwork: 11/21/11

Write equation of a line given $(2, 5)$ and $(-1, 5)$

$f(x) = 2x + 6$
 $g(x) = x^2 - 7$
 Find $g(f(x))$

$\frac{5-5}{-1-2} = \frac{0}{-3} = 0$
 $y - 5 = 0(x - 2)$
 $y - 5 = 0$
 $y = 5$

$(2x+6)^2 - 7$
 $(2x+6)(2x+6) - 7$
 $4x^2 + 24x + 36 - 7$
 $4x^2 + 24x + 29$

3.1 Graphing Systems Method
 Algebra 2 5.0

Name: _____
 Date: _____ Pd: _____

©A **system of equations** is a collection of equations in the same variables.
 ©The solution of a system of two linear equations in x and y is an ordered pair, (x, y) , that satisfies both equations.
 ©The solution (x, y) is the point of intersection for the graphs of the lines in the system.

Classifying Systems of Equations

If a system of equations has at least one solution, it is called **consistent**.

- If a system has exactly one solution, it is called **independent**.
- If a system has infinitely many solutions, it is called **dependent**.

If a system does not have a solution, it is called **inconsistent**.

$x - y = x - 4$
 $-y = -4$
 $y = 4$

$x - y = -2x + 5$
 $3x - y = 5$
 $-1 = 3 - 4$
 $-1 = -1$
 $-1 = -1$

$(3, -1)$

$-1 = -2(3) + 5$
 $-1 = -6 + 5$
 $-1 = -1$

2) $\begin{cases} x + 3y = 6 \\ x + 3y = -3 \end{cases}$

$x + 3y = 6$
 $x + 3y = -3$
 $y = \frac{1}{3}x - 2$
 $y = \frac{1}{3}x + 1$

Inconsistent

3) $\begin{cases} x - 2y = 4 \\ 3x - 6y = 12 \end{cases}$

$x - 2y = 4$
 $3x - 6y = 12$
 $y = \frac{1}{2}x - 2$
 $y = \frac{1}{2}x - 2$

Consistent Dependent



